VRT User Manual

1. Overview

Purpose of the VRT

The Verification Reporting Template (VRT) is a MS Access database tool that automates running of the E3 calculator, captures output from each E3 run, and aggregates the results by program and IOU. The ultimate goal is to generate the required parameters for the final RRM calculations and to generate the final PEB numbers.

The VRT can run the E3 on programs for different scenarios, or options, including:

Direct output from the IOU submitted E3 file (Option 0)
Direct pass through of E3 Claim Lines (Option 1)
ED Updated - E3 Claim Lines Modified Parameters (Option 2)
ED Updated - Program Tracking Modified Parameters (Option 3)

The VRT has built in queries that can be used to compare options and to view and QC results, and provides transparency throughout the process from updated measures to final PEB calculations.

How the VRT Works

The VRT processes the E3 runs the same for Options 1 (pass through claim), and Options 2 and 3 (updated data) with one exception: where the source data resides. Option 1 data derives from the submitted E3 line item data in table IOU_E3_Claim_Q42007. Options 2 and 3 data is appended to the Verification table by the contract groups. This table has a parallel format as the IOU_E3_Claim data, but has updated parameters.

Option 0 is the direct output from the submitted E3 claim files saved in the IOU_E3_Output_Q42007 table. Option 0 has not been re-run through the E3 calculator. Having Option 0 stored in the database allows for direct comparisons between the options.

Program level data, such as program name and costs are contained in the IOU_E3_Cost_Q42007 table. Mapping between data and E3 calculator are contained in mapping tables.

When a program is processed, the following occurs:

- if not already loaded, the appropriate E3 calculator is loaded depending on the IOU of the program
- measure-level and program-level data is retrieved from the database for the current program
- for the first program run, the total program costs are copied to the appropriate cells of the Input sheet in the E3 calculator. If there are multiple runs, then program cost cells are blank for the runs after the first run
- Measure line-item is copied to the rows of the Input sheet.

- if 1) the row limit of the E3 calculator is reached, or 2) the end of the measure data is reached, then the output from the Export sheet of the E3 calculator is saved to the Results_Savings_Claim table
- if one of the options has been checked to save the E3 output, the E3 run file will be saved
- it is possible to have multiple E3 runs for each program if the number of line items exceed the row limit of the E3 calculator. For each run, the run number is incremented and saved with the output data for each run

The VRT is particularly useful for programs with large number of measures. Some programs may contain over 100,000 updated measures. For these programs the VRT will run the E3 calculator multiple times until all of the measures have been processed. The VRT will track and run all E3 runs and save the output for each run.

Contents and Appendices

The following sections describe how to use the VRT. These include Section 2. Steps to Run the VRT; Section 3. Viewing Run Results and Quality Control; Section 4. Import and Export Functions; and Section 5. Utilities and Settings.

Appendix A contains the Draft Rules for Populating the VRT.

2. Steps to Run and Post VRT

This section describes the step by step approach to run the VRT program.

Copy and Rename VRT Original for Each Program

Each Program should have its own copy of the VRT. The contract group, program id, and run option should be saved as part of the VRT filename. The format is:

RRIM VRT_DB 2006-07 (v4_3) [ContractGroupName_ProgramID_ScenarioName].mdb

An example of a renamed VRT is as follows:

RRIM VRT_DB 2006-07 (v4_3) [PGEInd_PGE2004_WithoutInteractive].mdb

Update Verification Table

Once the Contract Groups have updated the program tracking data in their systems (such as SAS), then the updated data should be appended to the Verification table in the VRT database. This is the only update that the contract groups need to do to the database.

Running E3 Calculator

Running the E3 calculator consists of loading the Main form, selecting Option, selecting Programs, selecting output options, and clicking the Run E3 Calculations button. After the results are run, the results should be QC'd and the VRT should be posted. Figure 1 shows the Main form.

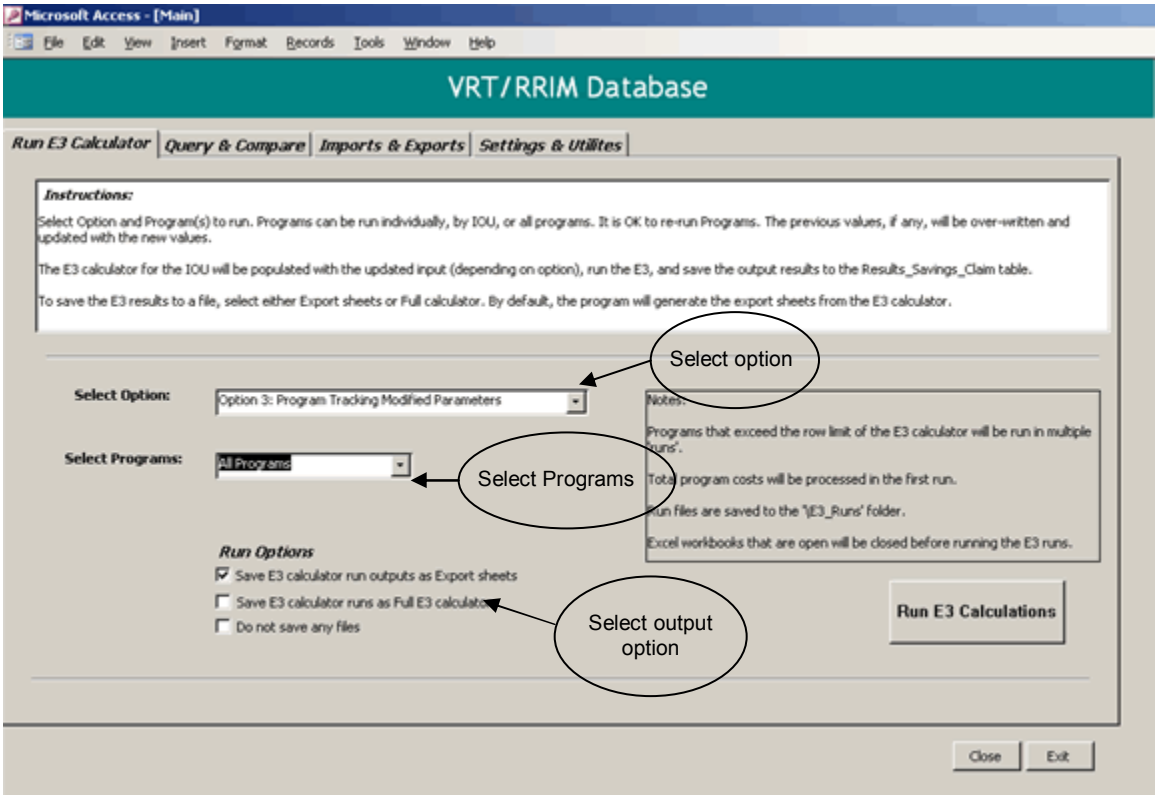

Figure 1. Main form.

Load Main Form

The Main form is loaded by double-clicking on the Main form under the Forms section of the VRT database.

Select Option

Select which option to run. If the Verification contains an updated program for Option 3, then select Option 3. If the updated data is Option 2, then select Option 2. In order to QC the runs and compare options, Option 1 needs to be run for the updated programs.

Select Programs

The choices are: All Programs, PGE Programs, SCE Programs, SCG Programs, SDGE Programs, and a list of all programs that can be selected individually. For Options 2 and 3, the E3 will only be run for Programs that are in the Verification table, so All Programs can be selected. For Option1, the All Programs selection will run all programs, which may take up to an hour to run.

Select Output Options

Output is optional. The default is the condensed E3 Export file. Other choices include the Full E3 calculator, or No Files. Files are saved to the E3_Runs folder.

Run E3 Calculations

To run the E3 Calculations, click the Run E3 Calculations button. The status of the runs is shown at the bottom of the screen on the status bar.

Run Option 1

As previously mentioned, Option 1 should be run in order to compare options to Option 1.

QC Results

Before the VRTs are posted, they should be QC'd. Section 3 discusses the Query & Compare tab which assists in the QC'ing and viewing of the results data.

Post VRT

After the E3 Calculations have been run and the results QC'd, then the VRT should be made available to ED by posting to an FTP site.

Notes and Troubleshooting

This section contains general notes and troubleshooting tips.

- The VRT will close any Excel workbooks before running, so save and close any Excel files before running the E3 calculations.
- Do not open and work on any Excel files while the E3 calculations are running as this could interfere with the E3 calculations and cause an error.
- If there is an error during the run, try exiting the program and running again. If the error continues then contact Wayne Hauck, wayne.hauck@IntergyCorp.com, 415-608-1860.

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3. Viewing Run Results and Quality Control

Figure 2 shows the Query & Compare tab. This tab can be used to compare options and view results which is useful to QC the run results.

The top five buttons allow comparison between Options. If the 'Show only records when there is a difference' is checked, then only records where there is a difference will be shown. Otherwise, all programs will be shown. For comparisons with Options 1, 2, and 3 only records of the programs with results (have been run) will be shown.

The bottom three buttons will display the results 1) rolled-up by IOU, 2) rolled-up by Program, and 3) all the run results.

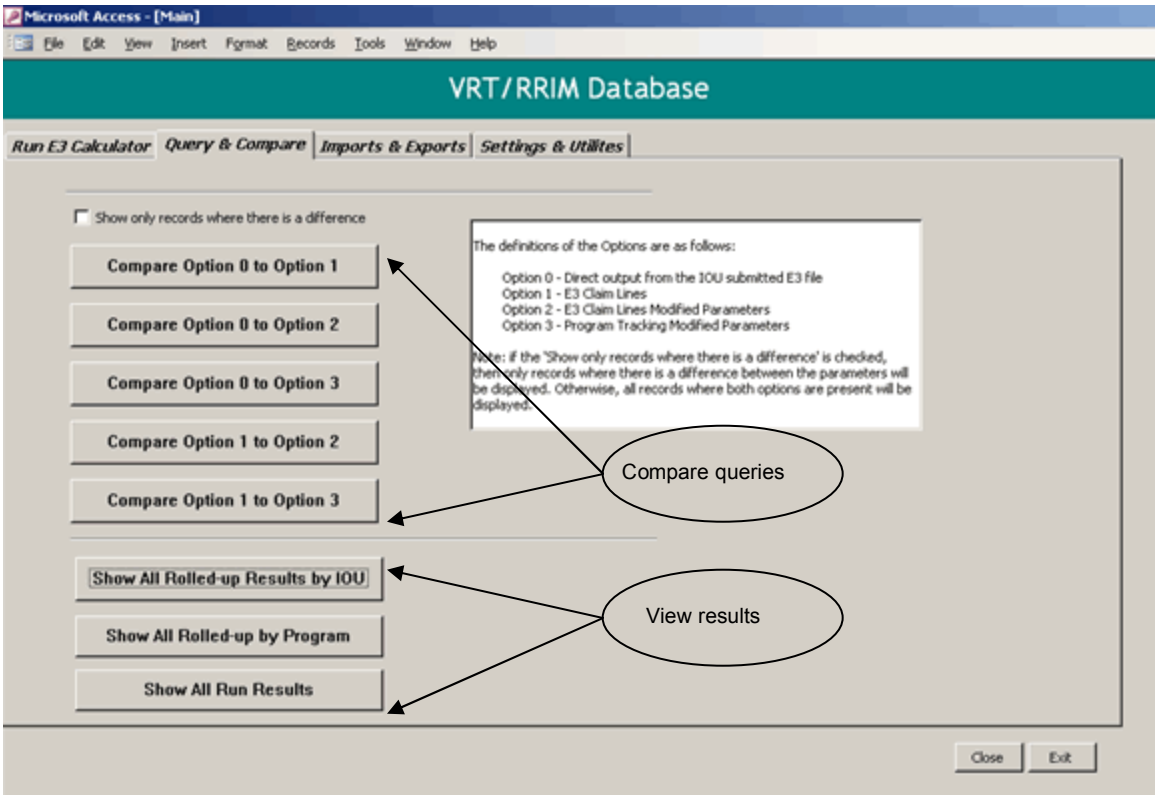


Figure 2. Query & Compare tab

4. Import and Export Functions

This section discusses the functions on the Imports & Exports tab. This tab includes: 1) generating the RRM Calculations spreadsheet, 2) importing results from other VRT databases, and 3 importing IOU Claim tables. The Import & Export tab is shown in Figure 3.

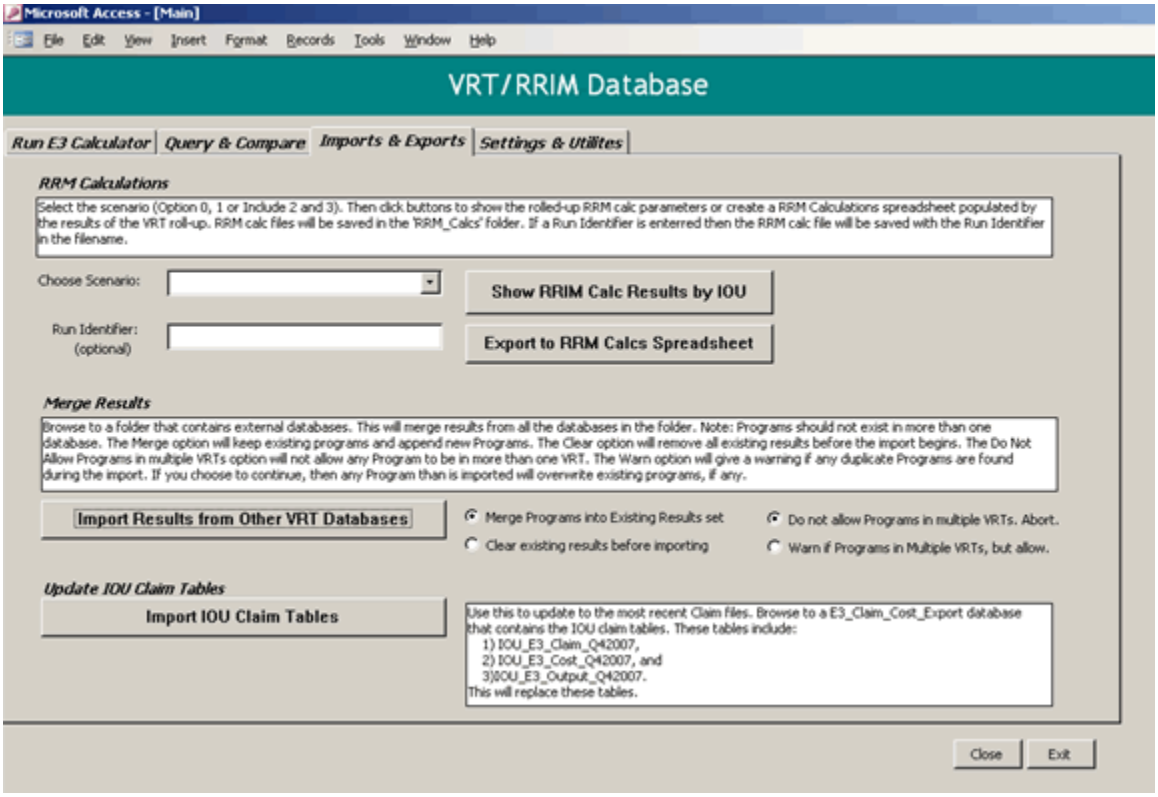


Figure 3. Imports & Exports tab.

RRM Calculations

The RRM Calculations can be performed for three options:

- Option 0
- Option 1, and
- Options 2 & 3

If Option 0 or 1 is selected, then the RRM Calculations will not include updated results. If Option 2 & 3 is selected, then if a Program has Option 2 or 3 results, those values will be used in the RRM calculation instead of Option 1. If Programs do not have Option 2 or 3 results (not updated) then Option 1 will be used for that program.

There are two buttons.

- the Show RRM Calc Results button will display all of the parameters that feed into the RRM Calculations spreadsheet.
- the Export to RRM Calculation spreadsheet button will generate the Excel RRM Calculation spreadsheet. The file will be saved under RRM_Calcs folder. If a Run

Identifier is entered into the textbox (optional), then the RRM Calcs file will be saved with the identifier in the file name.

Merge Results

Merge results is a import utility that will scan a browsed folder and import all of the records in the Results_Savings_Claim table from all the VRT databases in the folder. Options include merge into the existing Results, or clear all existing results before importing. There are also options to not allow any duplicate programs, or to allow, but give a warning. If a merge occurs, any existing programs with the same Program ID will be deleted before the import takes place.

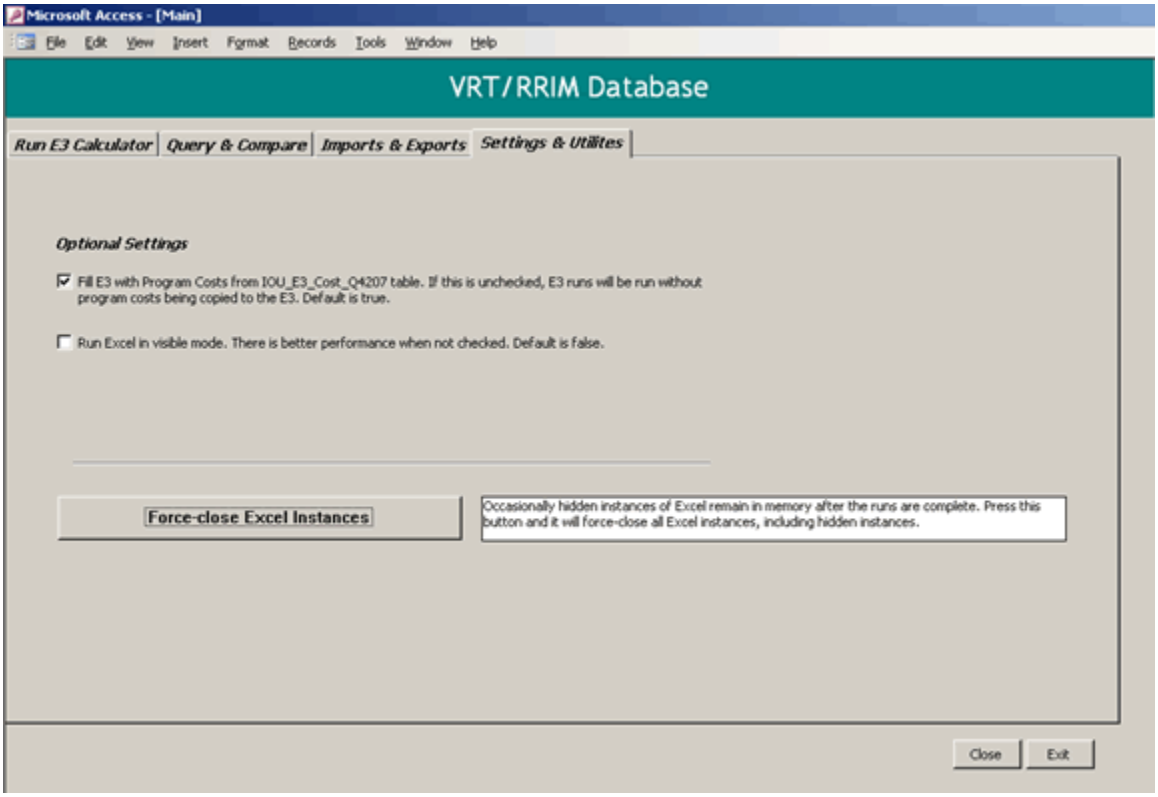
Update IOU Claim Tables

This is a utility that will import the IOU_E3 tables into the VRT. This can be used if there are updated results in the IOU_E3_Claim, IOU_E3_Cost, and IOU_E3_Output tables.

5. Settings and Utilities

Figure 4 shows the Settings & Utilities tab. This tab contains the following functions:

- Fill with Program Costs. Defaults to checked.
- Run Excel in Visible Mode (optional).
- Force-close Excel Instances. This will close hidden instances of Excel.



APPENDIX A. Draft Rules for Populating VRT_DB 2006-07. v4_0 October 27, 2008

Field_Name	Description	Rules
EDCaseID	1st part of a three part key (EDCaseID, EDFuelDomain, EDProgramID) that forms a globally unique key for all 2006-07 verification records.	Assigned by EM&V contractor to uniquely define program tracking records. Note that only observations in the program tracking database that have either positive or negative savings for kWh and/or Therms **AND** have a paid date can be included in the VRT. For Option 2, construct a unique value by appending a sequential number to the string "Opt2_".
EDFuelDomain	2nd part of a three part key (EDCaseID, EDFuelDomain, EDProgramID) that forms a globally unique key for all 2006-07 verification records.	Part of a three part key (EDCaseID, EDFuelDomain, EDProgramID) that forms a globally unique key with within all verification records for program cycle 2006-08. Option 1 and 2 value = "NA"
EDProgramID	3rd part of a three part key (EDCaseID, EDFuelDomain, EDProgramID) that forms a globally unique key for all 2006-07 verification records.	Part of a three part key (EDCaseID, EDFuelDomain, EDProgramID) that forms a globally unique key with within all verification records for program cycle 2006-08. The assumption is that each program will be processed with only one of the two Options (2 or 3).
EDIOUE3LineItemLinkValue	See Field_Name	This is single field or a concatenation of the program tracking fields, which may or may not have been transformed, such as type conversion, that were used to match program tracking records to lines in the IOU E3 claim. Each contractor should document how this field was populated and details of the E3 matching algorithm for each program. Option 2 value = "NA"
EDVRTProcessingOption	See Field_Name	Set to one of two values "Option 2: E3 Claim Lines Modified Parameters", or "Option 3: Program Tracking Modified Parameters"
EDIOU	See Field_Name	Assign IOU abbreviation based on EDProgramID. Possible values are PGE, SCE, SCG, SDGE.
EDStrata	Description of sample strata	For programs not included in the on-site verification work, value = "NA." For cases in the other programs which were not included in the sample frame for installation inspections value = "Not in Frame." All other cases are assigned a value that describes the range of values for all parameters used to define the strata, e.g., Single Family Dwellings: 4,712 thru 10,950 kWh. Option 2 value = "NA". If no stratification then value = "Simple Random Sample"

Field_Name	Description	Rules
EDRecruitStatus	Disposition of all cases	For programs not included in the on-site verification work, value = "NA." For cases in the other programs which were not included in the sample frame for installation inspections value = "Not in Frame." For all other cases, if the case was successfully recruited value = "Recruited". For non-respondents value = a brief description of the reason for non-response. Option 2 value = "NA"
EDCompleted	See Field_Name	If an installation inspection to verify installation count was completed assign value = -1 (True), else value = 0 (False). Option 2 value = NULL
EDDualFuel	See Field_Name	If this case belongs to both the fuel domains value = -1 (True), else value = 0 (False). Option 2 value = NULL
EDHighImpactMea	See Field_Name	For program receiving verification studies, if the case belongs to an EDSampleDesignMeaGroup deemed to be of "high" impact, value = -1 (True), else value = 0 (False). Option 2 value = NULL
EDSampleDesignMeaGroup	Classification of measures defined by the ED	As defined by each contract group for programs receiving verification studies. Option 2 value = NULL
IOUE3MeaName	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkMeaName	See Field_Name	Assign the value from the IOU program tracking database field or fields that provide the most detailed description of the measure.
EDUpdatedMeaName	See Field_Name	Assign all values = IOUPrgTrkMeaName. Assign any "NA" values = IOUE3MeaName.
IOUE3DEERRunID	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkDEERRunID	See Field_Name	Assign the value from the IOU program tracking database.
EDUpdatedDEERRunID	See Field_Name	To be determined by DEER Rules team in next release.
IOUE3ClimateZone	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkClimateZone	See Field_Name	Assign the value from the IOU program tracking database.

Field_Name	Description	Rules
EDUpdatedClimateZone	See Field_Name	The value is based on matching IOUPrgTrkSiteZIPCode to the ZIP codes in table IOUZIPCZs. Top the extent possible, prior to the match, the program tracking ZIP code should be cleaned so that it is consitent with other information about the site's location available in the program tracking data. Match to the columns of the lookup that are associated with the EDIOU for each record. If there is no match then value = IOUPrgTrkClimateZone. If that is missing, value = IOUE3ClimateZone. In some cases, the match may not be unique as there are two climate zones for some ZIP codes in the lookup In those cases, if the program tracking data has a climate zone use it, if not value = "System." . Option 2 value = IOUE3ClimateZone. To obtain correct benefits calculation all values must be among those allowed by the IOUCZs lookup table. If a climate zone is not in that table value = "System"
IOUE3ExAnteTargetSector	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteTargetSector	See Field_Name	Assign the value from the IOU program tracking database.
EDUpdatedExAnteTargetSector	See Field_Name	Assign values = IOUPrgTrkExAnteTargetSector. Assign any missing or non-conforming values found in the program tracking data = IOUE3ExAnteTargetSector. To obtain correct benefits calculation all values must be among those allowed by the IOUTargetSector lookup table.
IOUE3MeaElectricEndUseShape	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkMeaElectricEndUseShape	See Field_Name	Assign the value from the IOU program tracking database.
EDUpdatedMeaElectricEndUseShape	See Field_Name	Assign all values = IOUPrgTrkMeaElectricEndUseShape. Assign any missing or non-conforming values found in the program tracking data = IOUE3MeaElectricEndUseShape. To obtain correct benefits calculation all values must be among those allowed by the IOUElecShape lookup table.
IOUE3ExAnteGrMeaCost	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteGrMeaCost	See Field_Name	Assign the value from the IOU program tracking database. If no field with this data exists in the program tracking database then value = null. Option 2 value = NULL.
EDUpdatedExAnteGrMeaCost	See Field_Name	The value assigned is = to the EDImputedExAnteGrMeaCost times the inverse of the install rate.

Field_Name	Description	Rules
EDImputedExAnteGrMeaCost	See Field_Name	This assumes that incremental costs required by the E3 are not present in any of the program tracking data. If cost per unit is present in the program tracking, then accept the cost per unit from the program tracking data. If cost per unit is not present in the program tracking, share out the total cost for each E3 line to its constituent program tracking members, giving each a share of the total costs based on its share of the total EDFilledExanteQuantity (this allocates costs for all measures regardless of the outcome of the inspection) for a given E3 row. If there are redundant cases because of a dual fuel sample design and the presence of cases that save both electricity and gas, divide the units equally between both fuels prior to sharing the costs. The EDDualFuel field is included to facilitate this split of costs. This allocated cost for each row is then divided by EDFilledExanteQuantity (this allocates costs for all measures regardless of the outcome of the inspection) to arrive at a gross incremental cost per unit.
IOUE3ExAnteEndUserRebate	See Field_Name.	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteEndUserRebate	See Field_Name	Assign the sum of all payments made by the program to any parties for each case.
EDUpdatedExAnteEndUserRebate	See Field_Name	Set equal to end user rebate per unit if present times the inverse of the install rate. If end user rebate per unit is not present in the program tracking, and there are no redundant cases, i.e., no cases save both kWh and Therms, divide the program tracking total rebate by EDFilledExanteQuantity and then multiply by the inverse of the install rate. For any redundant cases divide the rebate equally between the electric and gas cases and then divide by EDFilledExanteQuantity and then multiply by the inverse of the install rate. Option 2 value = IOUE3ExAnteEndUserRebate.
IOUE3ExAnteIncentiveToOthers	See Field_Name.	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteIncentiveToOthers	See Field_Name.	Assign the sum of all payments made by the program to any parties for each case. Option 2 value = NULL

Field_Name	Description	Rules
EDUpdatedExAnteIncentiveToOthers	See Field_Name.	Note: The resulting incentive to others must be multiplied by the inverse of the install rate. If incentive to others per unit is present in the program tracking, then accept the incentive to others per unit from the program tracking data. If incentive to others per unit is not present in the program tracking, share out the total incentive to others for each E3 line to its constituent program tracking members, giving each a share of the total incentive to others based on its share of the total quantity for a given E3 row. If there are redundant cases because of a dual fuel sample design and the presence of cases that save both electricity and gas, divide the units equally between both fuels prior to sharing the incentive to others. The EDDualFuel field is included to facilitate this split of incentive to others. This allocated incentive to others for each row is then divided by the EDFilledExanteQuantity (this allocates incentive to others for all measures regardless of the outcome of the inspection to arrive at a gross incremental incentive to others per unit. Option 2 value = IOUE3ExAnteIncentiveToOthers
IOUE3ExAnteDirectInstallLab	See Field_Name.	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteDirectInstallLab	See Field_Name.	Assign the sum of all payments made by the program to any parties for each case.
EDUpdatedExAnteDirectInstallLab	See Field_Name.	Note: The resulting direct install labor per unit must be multiplied by the inverse of the install rate. If direct install labor per unit is present in the program tracking, then accept the direct install labor per unit from the program tracking data. If direct install labor per unit is not present in the program tracking, share out the total direct install labor for each E3 line to its constituent program tracking members, giving each a share of the total direct install labor based on its share of the total quantity for a given E3 row. If there are redundant cases because of a dual fuel sample design and the presence of cases that save both electricity and gas, divide the units equally between both fuels prior to sharing the direct install labor. The EDDualFuel field is included to facilitate this split of direct install labor. This allocated direct install labor for each row is then divided by the EDFilledExanteQuantity (this allocates direct install labor for all measures regardless of the outcome of the inspection to arrive at a gross incremental direct install labor per unit. Option 2 value = IOUE3ExAnteDirectInstallLab.
IOUE3ExAnteDirectInstallMat	See Field_Name.	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteDirectInstallMat	See Field_Name.	Assign the sum of all payments made by the program to any parties for each case.

Field_Name	Description	Rules
EDUpdatedExAnteDirectInstallMat	See Field_Name.	Note: The resulting direct install material per unit must be multiplied by the inverse of the install rate. If direct install material per unit is present in the program tracking, then accept the direct install material per unit from the program tracking data. If direct install material per unit is not present in the program tracking, share out the total direct install material for each E3 line to its constituent program tracking members, giving each a share of the total direct install material based on its share of the total quantity for a given E3 row. If there are redundant cases because of a dual fuel sample design and the presence of cases that save both electricity and gas, divide the units equally between both fuels prior to sharing the direct install material. The EDDualFuel field is included to facilitate this split of direct install material. This allocated direct install material for each row is then divided by the EDFilledExanteQuantity (this allocates direct install material for all measures regardless of the outcome of the inspection to arrive at a gross incremental direct install material per unit. Option 2 value = IOUE3ExAnteDirectInstallMat.
IOUE3ExAnteGrUnitSavkWh	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteGrUnitSavkWh	See Field_Name	Assign the value from the IOU program tracking database. For Option 2 value = NULL.
EDUpdatedExanteGrUnitSavkWh	See Field_Name	To be determined by DEER Rules team in next release. Savings must be scaled to EDUpdatedExAnteQuantity. For cases not receiving DEER updates, value = EDImputedExanteGrUnitSavkWh.
EDImputedExanteGrUnitSavkWh	See Field_Name	Assign value = IOUPrgTrkExAnteGrSavkWh / EDFilledExanteQuantity
IOUE3ExAnteGrUnitSavkW	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteGrUnitSavkW	See Field_Name	Assign the value from the IOU program tracking database. For Option 2 value = NULL.
EDUpdatedExanteGrUnitSavkW	See Field_Name	To be determined by DEER Rules team in next release. Savings must be scaled to EDUpdatedExAnteQuantity. For cases not receiving DEER updates, value = EDImputedExanteGrUnitSavkW.
EDImputedExanteGrUnitSavkW	See Field_Name	Assign value = IOUPrgTrkExAnteGrSavkW / EDFilledExanteQuantity
IOUE3ExAnteGrUnitSavTherms	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteGrUnitSavTherms	See Field_Name	Assign the value from the IOU program tracking database. For Option 2 value = NULL.

Field_Name	Description	Rules
EDUpdatedExanteGrUnitSavTherms	See Field_Name	To be determined by DEER Rules team in next release. Savings must be scaled to EDUpdatedExAnteQuantity. For cases not receiving DEER updates, value = EDImputedExanteGrUnitSavTherms.
EDImputedExanteGrUnitSavTherms	See Field_Name	Assign value = IOUPrgTrkExAnteGrSavTherms / EDFilledExanteQuantity
IOUE3ExAnteGasSector	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteGasSector	See Field_Name	Assign the value from the IOU program tracking database
EDUpdatedExAnteGasSector	See Field_Name	Assign values = IOUPrgTrkExAnteGasSector. Assign any missing or non-conforming values found in the program tracking data = IOUE3ExAnteGasSector. To obtain correct benefits calculation all values must be among those allowed by the IOUGasSector lookup table.
IOUE3ExAnteGasSavProfile	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteGasSavProfile	See Field_Name	Assign the value from the IOU program tracking database.
EDUpdatedExAnteGasSavProfile	See Field_Name	Assign values = IOUPrgTrkExAnteGasSavProfile. Assign any missing or non-conforming values found in the program tracking data = IOUE3ExAnteGasSavProfile. To obtain correct benefits calculation all values must be among those allowed by the IOUGasShape lookup table.
IOUE3ExAnteEUL	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim, converted to numeric data type.
IOUPrgTrkExAnteEUL	See Field_Name	Assign the value from the IOU program tracking database, converted to numeric data type.
EDUpdatedExAnteEUL	See Field_Name	Assign values = IOUPrgTrkExAnteEUL. Assign any missing values found in the program tracking data = IOUE3ExAnteEUL.
IOUE3ExAnteNTGR	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim. These values have been converted to numeric data type., scaled to 1, i.e., values go from 0 to 1.
IOUPrgTrkExAnteNTGR	See Field_Name	IOUPrgTrkExAnteProgramTypeNTGR converted to numeric data type, scaled to 1. i.e. values go from 0 to 1.
EDUpdatedExAnteNTGR	See Field_Name	Assign values = IOUPrgTrkExAnteNTGR. Assign any missing values found in the program tracking data = IOUE3ExAnteNTGR.
IOUE3ExAnteTOUACAdjustment	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.

Field_Name	Description	Rules
IOUPrgTrkExAnteTOUACAdjustment	See Field_Name	Assign the value from the IOU program tracking database.
EDUpdatedExAnteTOUACAdjustment	See Field_Name	Assign values = IOUPrgTrkExAnteTOUACAdjustment. Assign any missing values found in the program tracking data = IOUE3ExAnteTOUACAdjustment.
IOUE3ExAnteQuantity2006Qtr1	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteQuantity2006Qtr1	See Field_Name	Value = IOUPrgTrkExAnteQuantity, if IOUPrgTrkPaidDate falls in this quarter.
EDUpdatedExAnteQuantity2006Qtr1	See Field_Name	Value = EDUpdatedExAnteQuantity, if EDUpdatedPaidandInstalledDate falls in this quarter, else value = NULL.
IOUE3ExAnteQuantity2006Qtr2	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteQuantity2006Qtr2	See Field_Name	Value = IOUPrgTrkExAnteQuantity, if IOUPrgTrkPaidDate falls in this quarter.
EDUpdatedExAnteQuantity2006Qtr2	See Field_Name	Value = EDUpdatedExAnteQuantity, if EDUpdatedPaidandInstalledDate falls in this quarter, else value = NULL.
IOUE3ExAnteQuantity2006Qtr3	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteQuantity2006Qtr3	See Field_Name	Value = IOUPrgTrkExAnteQuantity, if IOUPrgTrkPaidDate falls in this quarter.
EDUpdatedExAnteQuantity2006Qtr3	See Field_Name	Value = EDUpdatedExAnteQuantity, if EDUpdatedPaidandInstalledDate falls in this quarter, else value = NULL.
IOUE3ExAnteQuantity2006Qtr4	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteQuantity2006Qtr4	See Field_Name	Value = IOUPrgTrkExAnteQuantity, if IOUPrgTrkPaidDate falls in this quarter.
EDUpdatedExAnteQuantity2006Qtr4	See Field_Name	Value = EDUpdatedExAnteQuantity, if EDUpdatedPaidandInstalledDate falls in this quarter, else value = NULL.
IOUE3ExAnteQuantity2007Qtr1	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim.
IOUPrgTrkExAnteQuantity2007Qtr1	See Field_Name	Value = IOUPrgTrkExAnteQuantity, if IOUPrgTrkPaidDate falls in this quarter.
EDUpdatedExAnteQuantity2007Qtr1	See Field_Name	Value = EDUpdatedExAnteQuantity, if EDUpdatedPaidandInstalledDate falls in this quarter, else value = NULL.

Field_Name	Description	Rules
IOUE3ExAnteQuantity2007Qtr2	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim
IOUPrgTrkExAnteQuantity2007 Qtr2	See Field_Name	Value = IOUPrgTrkExAnteQuantity, if IOUPrgTrkPaidDate falls in this quarter
EDUpdatedExAnteQuantity2007 Qtr2	See Field_Name	Value = EDUpdatedExAnteQuantity, if EDUpdatedPaidandInstalledDate falls in this quarter, else value = NULL.
IOUE3ExAnteQuantity2007Qtr3	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim
IOUPrgTrkExAnteQuantity2007 Qtr3	See Field_Name	Value = IOUPrgTrkExAnteQuantity, if IOUPrgTrkPaidDate falls in this quarter.
EDUpdatedExAnteQuantity2007 Qtr3	See Field_Name	Value = EDUpdatedExAnteQuantity, if EDUpdatedPaidandInstalledDate falls in this quarter, else value = NULL.
IOUE3ExAnteQuantity2007Qtr4	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim
IOUPrgTrkExAnteQuantity2007 Qtr4	See Field_Name	Value = IOUPrgTrkExAnteQuantity, if IOUPrgTrkPaidDate falls in this quarter.
EDUpdatedExAnteQuantity2007 Qtr4	See Field_Name	Value = EDUpdatedExAnteQuantity, if EDUpdatedPaidandInstalledDate falls in this quarter, else value = NULL.
IOUE3ExAnteGrSavkWh	See Field_Name	E3 has no column for total savings. By definition it is always missing. Include here to maintain symmetry in field naming.
IOUPrgTrkExAnteGrSavkWh	See Field_Name	Assign value = IOUPrgTrkExAnteQuantity times IOUPrgTrkExAnteGrUnitSavkWh. Missing values = NULL.
EDUpdatedExanteGrSavkWh	See Field_Name	Assign value = EDUpdatedExAnteQuantity times EDUpdatedExanteGrUnitSavkWh
IOUE3ExAnteGrSavkW	See Field_Name	E3 has no column for total savings. By definition it is always missing. Include here to maintain symmetry in field naming.
IOUPrgTrkExAnteGrSavkW	See Field_Name	Assign value = IOUPrgTrkExAnteQuantity times IOUPrgTrkExAnteGrUnitSavkW. Missing values = NULL.
EDUpdatedExanteGrSavkW	See Field_Name	Assign value = EDUpdatedExAnteQuantity times EDUpdatedExanteGrUnitSavkW
IOUE3ExAnteGrSavTherms	See Field_Name	E3 has no column for total savings. By definition it is always missing. Include here to maintain symmetry in field naming.
IOUPrgTrkExAnteGrSavTherms	See Field_Name	Assign value = IOUPrgTrkExAnteQuantity times IOUPrgTrkExAnteGrUnitSavTherms. Missing values = NULL.

Field_Name	Description	Rules
EDUpdatedExanteGrSavTherms	See Field_Name	Assign value = EDUpdatedExAnteQuantity times EDUpdatedExanteGrUnitSavTherms
IOUE3ExAnteQuantity	See Field_Name and E3 Calculator Technical Memo 4a	Assign the value found in the "matched" line of the E3 claim
IOUPrgTrkExAnteQuantity	See Field_Name	Assign the value from the IOU program tracking database.
EDUpdatedExAnteQuantity	See Field_Name	EDInstallRate times EDFilledExAnteQuantity.
EDFileReviewExAnteQuantity	See Field_Name	Assign the value found in IOU project file for cases where EDCompleted = True, set the value = NULL for all other cases.
EDInspectionExAnteQuantity	See Field_Name	Assign the value found in the installation inspection for cases where for EDCompleted = True, set the value = NULL for all other cases.
EDFilledExanteQuantity	See Field_Name	First, set all values equal to IOUPrgTrkExAnteQuantity. Then for sampled cases replace the values with those found in EDFileReviewExAnteQuantity. The rationale for doing this is that the number of units that we expect to see is represented in the EDFileReviewExAnteQuantity which is based on a review of the file documents which list the measures and the size of the rebate for each and perhaps a record of a payment being made to the customer. Therefore, the values in EDFileReviewExAnteQuantity are assumed to be more accurate. For the non-sampled cases, if the IOUPrgTrkExAnteQuantity is missing, then 1.0 should be entered for EDFilledExAnteQuantity, since IOU installations cannot be adjusted if there is nothing to adjust. This should not result in biased estimates of gross savings. Note: need to adjust these quantities for upstream programs to reflect the time required for installation after payment. Some quantity may fall in 2008.

Field_Name	Description	Rules
EDInstallRate	See Field_Name	For the sampled cases, compute the install rate as the EDInspectionExAnteQuantity/EDFilledExanteQuantity. Compute an energy-weighted average for each stratum by multiplying each value by total gross savings for each case. The savings value will depend on the fuel domain (either IOUPrgTrkExanteGrSavkWh, IOUPrgTrkExanteGrSavTherms or the BTU equivalent of the sum of these two values). Divide the sum of this product for each stratum by the sum of the gross savings for the stratum to compute the energy-weighted install rate for each stratum. This energy-weighted install rate is assigned to the population of cases within the stratum (based on EDFuelDomain and EDStrata) from which the sample was originally drawn. . Any cases not represented by the sample (i.e., cases not in the sample frame) are assigned a rate = 1.
IOUPrgTrkPaidDate	See Field_Name	Assign the value from the IOU program tracking database. Missing values = NULL. Note: any instance of missing values for this field must be immediately investigated with the IOU. If unresolved they would result in the case being eliminated from the claim.
EDUpdatedPaidandInstalledDate	Basis for the annual or quarterly quantity	For upstream programs the value = IOUPrgTrkPaidDate plus an appropriate lag representing the average time between payment and installation. For downstream programs the value = IOUPrgTrkPaidDate.
IOUPrgTrkWorkPaperID	See Field_Name	Assign the value from the IOU program tracking database. Missing values = NULL.
IOUPrgTrkSiteZIPCode	See Field_Name	Assign the value from the IOU program tracking database. For upstream programs this is the ZIP code of the retailer location. For downstream this is the location where the measure was installed. Missing values = NULL.
IOUPrgTrkBuildingType	See Field_Name	Assign best available data describing the type of building. May involve converting codes to a more descriptive label or integrating information from more than one program tracking data field. Not clear what to do with upstream.
EDDEERTechnologyID	See Field_Name	DEER Tech ID assigned in the interim database. Tech ID is manually assigned based on EDProgramID, IOUPrgTrkMeaName, and IOUPrgTrkMeaNameAlternate by looking up the appropriate Tech ID in DEER 06-07 (Miser).
EDDEERImpactID	See Field_Name	DEER Impact ID is assigned in the interim database. First, the DEER 06-07 database (without interactive effects) is exported via Miser, which is then used as a lookup table. DEER Impact ID is looked up based on EDUpdatedBuildingType, EDDEERVintage, EDDE
EDUpdatedBuildingType	See Field_Name	
EDDEERVintage	See Field_Name	DEER weighted vintage used, based purely on IOU. i.e. for all SCE measures, "SCE Existing" vintage is used

Field_Name	Description	Rules
EDDEERUnitConversion	See Field_Name	
EDDEERExanteGrUnitEUSavkW	See Field_Name	Unit End Use kW savings associated with a DEER Impact ID. Value is scaled to IOUPrgTrkUnits from EDDEERUnits via EDDEERUnitConversion, if the two units are different. This will only have a value if EDDEERUpdateMapped = Yes, otherwise it will be NULL.
EDDEERExanteGrUnitEUSavkWh	See Field_Name	Unit End Use kWh savings associated with a DEER Impact ID. Value is scaled to IOUPrgTrkUnits from EDDEERUnits via EDDEERUnitConversion, if the two units are different.This will only have a value if EDDEERUpdateMapped = Yes, otherwise it will be NULL.
EDDEERExanteGrUnitEUSavTherms	See Field_Name	Unit End Use therm savings associated with a DEER Impact ID. Value is scaled to IOUPrgTrkUnits from EDDEERUnits via EDDEERUnitConversion, if the two units are different. This will only have a value if EDDEERUpdateMapped = Yes, otherwise it will be NULL.
IOUPrgTrkMeaNameAlternate	See Field_Name	Assign the alternate measure name from the IOU program tracking database, if one is given
EDDEERUpdateMapped	See Field_Name	Is set = Yes if the line item was successfully mapped to DEER 06-07 in the interim database, and UES values were subsequently updated.
EDRealizationRate	See Field_Name	For certain custom program elements (IOUPrgTrkProgramElement) where all measures are custom, a realization rate of 0.79 is applied to all line items within those program elements. Otherwise, for measures not falling into these custom program elements, ED
IOUPrgTrkUnits	See Field_Name	Assign the value from the IOU program tracking database.
EDDEERUnits	See Field_Name	Assign the value from the DEER update database